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LATE SCHOOL ENTRANCE, SOCIAL ACCEPTANCE, AND CHILDREN'S SCHOOL ACHIEVEMENT.

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THE RELATIONSHIP BETWEEN LATE ENTRANCE TO THE PUBLIC SCHOOL CLASSROOM AND THE SOCIAL AND EMOTIONAL ADJUSTMENT OF THE TRANSFER CHILD AND OTHER MEMBERS WITHIN THE CLASSROOM STRUCTURE WAS INVESTIGATED. FOUR ASPECTS OF THE PROBLEM OF LATE SCHOOL ENTRANCE WERE EXAMINED. NOTED EFFECTS WERE ON--(1) THE TOTAL SOCIAL STRUCTURE OF THE CLASSROOM, (2) THE SOCIAL STATUS OF THE LATE SCHOOL ENTRANT, (3) THE EMOTIONAL ADJUSTMENT OF THE LATE SCHOOL ENTRANT, AND (4) THE RELATIONSHIP BETWEEN THE TEACHER AND THE LATE SCHOOL ENTRANT. CHILDREN IN 25 CLASSROOMS, GRADES 4-6, CONSTITUTED THE STUDY SAMPLE. THE EXPERIMENTAL GROUP CONSISTED OF OVER 50 CHILDREN WHO ENTERED THE CLASSROOMS DURING A 2 1/2 MONTH PERIOD, MIDSCHOOL YEAR. CONTROL SUBJECTS WERE A NUMBER OF PUPILS WHO BEGAN IN THE CLASSROOMS AT THE START OF THE SCHOOL YEAR AND WHO REMAINED THEREIN. BY EXAMINING A NUMBER OF TEST SCORES OBTAINED AT SCHOOL ENTRY, DURING THE COURSE OF THE SCHOOL YEAR, AND AT THE END OF THE YEAR THE INVESTIGATORS NOTED THAT THE AREAS OF SOCIAL ACCEPTANCE AND SOCIAL STATUS SHOWED THE GREATEST AMOUNT OF DISPARITY BETWEEN THE TWO GROUPS. OTHER TESTS MEASURING ADJUSTMENT REVEALED NO SIGNIFICANT DIFFERENCES. HOWEVER, THE RELATIONSHIP OF LATE SCHOOL ENTRANCE AND MEASURES OF ACADEMIC ACHIEVEMENT REMAINED UNEXPLORED. (JH)

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# LATE SCHOOL ENTRANCE AND CHILDREN'S ADJUSTMENT

by

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# LATE SCHOOL ENTRANCE AND CHILDREN'S ADJUSTMENT

The great mobility of American families has produced a number of new problems for public school children and teachers. Kopp (16) has given careful attention to many of the legal, administrative and curricular problems centering around the transfer child. It is those problems revolving around the continuous introduction of newcomers to the already formed social structure of the schools' classrooms which are examined in this study. Two of Florida's major winter vacation counties, Palm Beach and Broward, were selected as communities which would provide proper settings for an investigation of some of the social-emotional adjustment problems for the late entering child and for his classmates.

Four aspects of the newcomer's adjustment to the school are studied in this project. These are: (1) the effects of late school entrance (December 1, 1957 through February 15, 1958) on the total social structure of the classroom, (2) the effects of late school entrance on the social status of the late school entrant, (3) the emotional adjustment of the late school entrant and (4) the relationship of teachers'

attitudes to the personal-social adjustment of late school entrants. Statistical comparisons between early, or regularly entering children in September, 1957, and of late entering children are made in order to appraise the effects of late school entrance.

## DEVELOPING THE PROBLEM

Only occasional studies of an experimental nature regarding the effects of introducing children into an already formed group have been made, although for three or more decades social status and social structure in public school classrooms have been studied. Small group research has been reported such as that by Phillips, Shenker and Revitz (27) in which the difficulties encountered by a fourth child introduced into an already formed three-child group were examined. These writers indicated that the new child must experiment in making behavioral adjustments fitting the common frame of reference of the nucleus group and that the most active child of the nucleus group is the one the newcomer imitates. Mills (23) found newly formed three-person groups frequently splitting into a pair and one other; the exact, spontaneous pairing of associations in these experimental groupings appeared to be a function both of the personality of the participants and the demands of the situation. Bavelas (2), studying group assimilation of changes in membership in relation to the size of the change, indicated that small changes can be more easily assimilated due to continuing reference points within the group. However, Chapple and Coon (7) point out that the system of social relationships or equilibrium in the group changes with the introduction of each new child.

The stability of the social status of the nucleus group members after

the arrival of newcomers has been studied by Bell and French (4) who reported that individual roles (leadership roles particularly) of the group do not shift appreciably with the shifting of members of one group to another, when not varying the size and general characteristics of the groups. Larsen and Hill (17) showed that the greater the stability of the social structure, the greater will be its influence on the new group members.

The distribution of sociometric choices of both newcomers and original group members may hinge on their positions in the social structure. Goldberg (10) showed that a group member's leadership role in group decision making will be perceived more often when his position in the communication network is more central. Jennings (13) found newcomers in a state training school for girls directing the majority of their sociometric choices to the well-chosen of the already formed group. Also, the well-chosen extended many of their choices to newcomers. However, considerable specificity in the well-chosen's choice of newcomers was reported as the newcomer was less frequently chosen for leisure activities than for work activities. Downie (8) compared children who had moved from school to school with those who had maintained a continuous residence and found that those children who had been in a single residence for two or three years after moving were higher in social acceptance than those in continuous residence. However, such favorable results do not appear to be the rule.

The research literature makes the following hypotheses related to the social structure of the classroom appear plausible:

1. Shifts in social status of original group members will occur as a product of newcomers being added to the group.

2. The constancy of social status will be inversely related to the number of late entrants entering a classroom during the year

3. Late school entrants will show greater choice for the already well-chosen members of the group.

4. Late school entrants will be chosen more often on a sociometric test on a "work" criterion (more formal activities of the group) than on a "play" criterion (a leisure and more intimate activity).

5. Late school entrants will tend to be below the original group members in social status throughout the year.

Research relevant to the effect of late school entrance in terms of producing personal-social problems for children has not been reported in sufficient detail in the literature for major conclusions to be drawn. Nash and Wolfe (25) point to the marginal role of the newcomer in the group and to the "uncertainty of the stranger's role" as constituting a threat to him which will be manifested by decreased inventiveness on his part. Sherif (30) found unfavorable attitudes and derogatory stereotypes being formed abou the other group when two strange groups were brought into functional contact. A report by Koos (15) on migrant workers in Florida has made it abundantly evident that a host of personal-social problems exist for children who are moved from school to school as parents follow the crops. The development or restructuring of any group may well hold some threat for its members. Bennis and Shepard (3), in stating a theory of group development, noted that the initial days of group life are filled with behavior aimed toward warding off anxiety. The newcomer's personal level of aspiration, Rasmussen and Zander (28) point out, may be impossible of attainment as he wrestles with achieving group membership and a feeling of failure may be his lot. Recent research at the University of Iowa by Castaneda, Palermo and McCandless (6,7) has demonstrated a relationship between anxiety and other features of the child's life as task difficulty, school achievement, and errors in complex learning tasks. Of particular importance to the present



study is the finding of negative relationships between manifest anxiety scores and sociometric test scores (20).

These findings bear on this study in supporting the following hypotheses:

6. Late school entrants will show a marked anxiety incumbent upon their struggle to adapt to and find a position in the already formed group. These differences will be evidenced both at the time of entering school and at the end of the school year.

7. Late school entrants will present observable evidence of their struggle (to fit into the already formed social structure) which will be manifested in behavioral symptoms identifiable by their teachers. Late entrants will manifest more such symptoms than the September entrants both at the time of entering school and at the end of the school year.

8. Late school entrants will tend to present poorer self-perceptions of personal-social adjustment than the September entrants both on entering school and at the end of the school year.

The major social force operating within the classroom may well be the teacher. The social climate of the classroom has received due attention from educational and social psychologists such as Lewin (18) whose experiments on autocratic and democratic atmospheres in children's groups have had a momentous impact on classroom procedure. Patterson (26) suggested that the teacher is of much influence in controlling the emotional problems of children. Gronlund (11) reported that children receiving higher sociometric scores from peers are also those for whom teachers show a preference for having in class. Anderson (1) pointed out the integrative possibilities of the teacher's relationships with children.

The evidence leads to the final hypothesis to be investigated:

9. Late school entrants in classes taught by teachers with greater insights and knowledge about children will tend to make greater gains in social status and personal adjustment during their stay in the classroom than will late entrants with teachers of less insight and knowledge.



## METHOD

### Subjects

A total of 25 white classrooms, 6 fourth, 6 fifth, and 13 sixth grade classrooms, located in Palm Beach and Broward Counties, Florida were selected for this study, largely because of anticipated increases in classroom enrollments of 20% or more in each class after schools would open in January, 1958. Preceding year enrollments afforded the basis for this prediction. Maclachlan (22), reporting on the 1950-55 total population increases in these counties, noted that Broward County increased by 99% and Palm Beach County by 43%. Due to winter weather conditions in 1957-58 the 20% increase prediction was occasionally in error, particularly in the 13 Palm Beach County schools. However, a total of 51 late school entrants in 21 classrooms (24 boys and 27 girls) coming between December 1, 1957 and February 15, 1958 were studied and provide the main data for this study. There were 11 fourth graders, 15 fifth graders, and 25 sixth graders constituting the total experimental or late entrant group.

The control subjects of the study are the fourth, fifth, and sixth graders of the 25 classrooms who began school during the first week of September, 1957 and who remained in the same classroom during the school year. These children have been well identified on background information as have each of the late entrants. Both a matched control group of September entrants and a stratified sample of control subjects serve as controls for the late entrant group when comparisons of scores are made. Due to difficulties in matching the entire 51 experimental subjects on the several criteria of age, sex, socio-economic status, and intelligence, the matched experimental and control groups were each reduced to 20 boys and 22 girls from 18 classrooms (9 fourth graders, 15 fifth graders, and 18 sixth

graders.) However, the total experimental group of 51 subjects was compared with a stratified control sample of 48 boys and 54 girls selected randomly (but proportionally) from each of the classrooms. The stratified group consists of two early school entrants selected randomly (for each experimental subject) from each of the 51 experimental subjects' classrooms.

Table 1 presents descriptive data covering age, sex, intelligence, and socio-economic status. It will be noted that the four groups in Table 1 are much alike on the background descriptive factors. Means and standard deviations are so similar that both t-tests and f-tests failed to reach statistical significance. The stratified control group differs little from the matched control group; neither of the control groups differ significantly from the smaller matched experimental group or the larger total experimental group on these background factors. Therefore, it appeared practical in analyzing the data to compare the experimental groups with both the matched and the stratified control groups only when the two control groups differ. It will be observed that the matched experimental group is always smaller than the total experimental group.

Testing Procedure

The entire study was carried out as an extension class project in a course for teachers titled Psychology of Child Development. The classes had one meeting in each of the two counties during the first week of each month from September, 1957 through May, 1958. At each meeting testing procedures were explained, test results were submitted by teachers, and the entire project was regularly evaluated. Teachers were encouraged to make use of all data in their daily classroom operations.

The data gathering procedure consisted principally of group testing by the teachers who then scored all tests. Test administrations were

TABLE 1

NUMBER, MEANS AND SD'S ON AGE, SEX, INTELLIGENCE, AND SOCIO-ECONOMIC STATUS OF THE CONTROL AND EXPERIMENTAL GROUPS

| Groups | Age (Months) | | | E-G-Y (IQ) | | | Socio-economic Status | | |
|---|---|---|---|---|---|---|---|---|---|
| | $\bar{X}$ | SD | N | $\bar{X}$ | SD | N | $\bar{X}$ | SD | N |
| **Control Stratified** | | | | | | | | | |
| Male | 125.42 | 10.78 | 48 | 117.75 | 19.41 | 44 | 10.96 | 2.95 | 48 |
| Female | 124.87 | 10.02 | 54 | 108.32 | 15.45 | 52 | 11.98 | 2.72 | 54 |
| Total | 125.13 | 10.34 | 102 | 112.65 | 17.91 | 96 | 11.50 | 2.86 | 102 |
| **Control Matched** | | | | | | | | | |
| Male | 126.20 | 10.60 | 20 | 114.00 | 12.07 | 20 | 10.85 | 1.95 | 20 |
| Female | 124.27 | 11.05 | 22 | 110.32 | 16.73 | 22 | 11.95 | 2.66 | 22 |
| Total | 125.19 | 10.75 | 42 | 112.07 | 14.64 | 42 | 11.43 | 2.39 | 42 |
| **Experimental Matched** | | | | | | | | | |
| Male | 126.10 | 11.29 | 20 | 114.55 | 13.44 | 20 | 11.70 | 3.13 | 20 |
| Female | 124.23 | 11.33 | 22 | 107.64 | 17.62 | 22 | 12.23 | 3.34 | 22 |
| Total | 125.12 | 11.22 | 42 | 110.93 | 15.97 | 42 | 11.98 | 3.21 | 42 |
| **Experimental Total** | | | | | | | | | |
| Male | 126.71 | 11.23 | 24 | 114.57 | 13.41 | 23 | 11.96 | 3.34 | 23 |
| Female | 125.59 | 11.06 | 27 | 107.08 | 17.89 | 25 | 11.74 | 4.11 | 27 |
| Total | 126.12 | 11.05 | 51 | 110.67 | 16.18 | 48 | 11.84 | 3.73 | 50 |

scheduled throughout the school year in order to obtain initial measures of social-emotional adjustment of both early and late school entrants as well as changes in scores during the year. Tests were generally administered during the first week of each month. Late school entrants were administered the initial tests (listed below for September) after their first week in school and thereafter took their tests at the regularly scheduled times. The test schedule was as follows:

1. September, 1957 (to all the approximately 750 children in the 25 classrooms who are hereafter called early school entrants)

   California Test of Personality, Elementary Series, Form AA, 1953
   Iowa Adaptation, Manifest Anxiety Test
   Wiley's Child Guidance Attitude Scale
   McGuire-White Socio-Economic Scale
   General Information Form

2. October, 1957 (to all children)

   Moreno type Sociometric Test
   Ohio Social Acceptance Scale

3. November, 1957 (to all children)

   Iowa Adaptation, Manifest Anxiety Test
   Haggerty-Olson-Wickman Behavior Rating Schedules, Schedule B

4. December, 1957 (to all children)

   Moreno type Sociometric Test
   Ohio Social Acceptance Scale
   (The tests used in September with early entrants were given to all late entering children after December 1 one week after school entry)

5. January, 1958 (only initial battery to all late school entrants. The Haggerty-Olson-Wickman Behavior Rating Schedule was completed by the teacher on each late entrant one month after he entered school.)

6. February, 1958 (to all children)

   Moreno type Sociometric Test
   Ohio Social Acceptance Scale
   (Initial test battery to all late school entrants through February 15)

7. March, 1958 (to all children)

Kent, E-G-Y. Scale D. Short Form Intelligence Test

8. April, 1958 (to all children in the 25 classrooms)

California Test of Personality, Elementary Series, Form AA, 1953
Iowa Adaptation, Manifest Anxiety Test
Moreno type Sociometric Test
Ohio Social Acceptance Scale
Haggerty-Olson-Wickmen Behavior Rating Schedules, Schedule B

The California Test of Personality, Elementary Series, Form AA (31) was administered to each early school entrant during the first week of September and in the second week of April. It was also administered to each late school entrant one week after his arrival at school and in the second week of April. The teachers read each item with the children in the group setting and the children marked their own answers.

The Iowa Adaptation, Manifest Anxiety Test (5) consists of 53 one-sentence items after which the child circles Yes or No to indicate that this is or is not true about him. Forty-two of the items are scored in the anxiety test; eleven items make up an L score which is not considered in this study inasmuch as its validity has not yet been ascertained. The anxiety test was administered to early school entrants in the first week of September, the first week of November, and in the second week of April. It was administered to late school entrants after one week in the new school and in the second week of April. A high score on this test indicates high anxiety.

The Wiley Child Guidance Scale (33) consists of 160 statements to which the teacher marks his answer as : (1) strongly agree, (2) agree, (3) undecided (4) disagree, or (5) strongly disagree. Although the instrument was devised to elicit parental attitudes, it has proven its effectiveness in differentiating child guidance attitudes among other groups (32). This scale was administered to all teachers in the study at the first group meeting in September, 1957,

before any testing of children had begun and the results were held until the final April testing so that teachers' initial attitudes could be studied in relation to the data gathered on the children.

The McGuire-White Index of Social Status (21) with minor adaptations was used with all children. Only three items, relating to (1) education of father (2) source of family income, and (3) father's occupation were used. Low scor indicate higher socio-economic status. This instrument was administered to early school entrants during the first week of September and to late school entrants one week after entering school.

In addition to the above data gathering procedures a General Information Form was completed by each child and keep current by his teacher throughout the year. On it was recorded information concerning birthdate, number, sex, and ages of siblings, number of schools attended, number of absences during the year, occupation and educational level of both parents, and the child's intelligence test scores. Teachers began gathering these data in September and as soon as a new child entered the classroom. These tests and materials constituted the initial data gathering procedures for both early and late school entrants and their continued use throughout the year provided re-test results designed to show change or progress by both early and late school entrants.

A Moreno type sociometric test consisting of two criteria, work and play, with three unweighted choices on each was administered to all classrooms in the first week of October, December, February and the second week of April. Similarly, the Ohio Social Acceptance Scale (29), which will be referred to as the OSAS, on which the names of all children in the classroom were listed and on which each child could check one of five degrees of preference for each other child (1. not okay; 2. don't know; 3. not friends,

but okay; 4. good friend; 5. very best friend) was administered at these four times. On the Moreno type sociometric test the child's total raw score was computed as well as scores for both work and play. In order to make scores from all groups comparable each child's score was computed as the proportion of all choices given in his group. The OSAS scores were computed as the average score (1-5) given to the child by all his classmates.

In order to obtain teachers' appraisals of children's adjustment the Haggerty-Olson-Wickman Behavior Rating Schedules, Schedule B (12) was completed by all teachers on all early school entrants in November and April and on all late school entrants one month after school entry and again in April. Scores for each child consisted of a summation of teacher's ratings on the thirty-five, 3-point rating scale.

The final data gathering instrument used was the Kent, E-G-Y, Scale D, Short Form Intelligence Test (14) administered to all children in March, 1958. The purpose for which this test was used was to define the general limits of intelligence in which both control and experimental groups fell. No need for more precise measures of intelligence was anticipated. IQ's were calculated from the results of these tests administered to all children in the first week of March, 1958.

It will be observed that test administrations were scheduled so that comparisons could be made between scores made by late and early school entrants on initial testing after each had been in the classrooms similar lengths of time. Also, continuous testing during the school year, particularly with the sociometric and the OSAS, allowed some conclusions to be drawn concerning change in social status and social acceptance. April testing permitted final, end-of-year comparisons.

**Statistical Analysis**

A matched control group of 42 children entering school in the first week of September, 1957 was selected for comparisons with the 42 experimental or late entering children, who entered school between December 1, 1957 and February 15, 1958 inclusively. The goal of matching the experimental children with controls in their own classrooms on age, sex, socio-economic status, and intelligence could only be achieved for 42 of the 51 late entering children. Late school entrants are called the "experimental" group. A stratified sample of 102 controls, two selected randomly for each of the 51 experimental subjects for whom data were complete, was also selected inasmuch as the matched groups were somewhat small. Therefore, two statistical comparisons are generally made:

1. Matched control group (n=42) and experimental matched group (n=42).
2. Stratified controls (102) and total experimental group (51).

In addition to the statistical comparisons between groups, changes in certain scores presumably reflecting the effects of late school entrance are appraised. Statistical techniques employed include t-tests of significance of difference between means, both Pearson-r and Spearman-rho correlational methods, chi-square analysis, and analysis of variance. The 5% confidence level was accepted for statistical significance. The null hypothesis is implied but not stated in each analysis. Generally, five types of analyses are made:

1. Correlational analyses and comparisons of means of initial and later scores.
2. Comparisons of means of controls and experimental groups on initial testing.
3. Comparisons of means of controls and experimental groups on final testing.

4. Comparisons of progress or change of early and late entrants.

5. Analysis of variance to test the effects of such factors as the number of late school entrants in the group on the test scores of the early entrants.

## RESULTS

1. The first hypothesis to be investigated bears on the effects of new children coming into a classroom on the social status of early school entrants: shifts in social status of original group members will occur as a product of newcomers being added to the group. Table 2 presents the correlational data on the 102 stratified controls who were selected as more representative of the entire group of early entrants than would be the smaller matched controls. It will be observed that the sociometric correlations between the first testing in October and the three later testings (December, February, and April) are all significant beyond the 1% level. The fact that sociometric results were not distributed normally made the use of a non-parametric statistic as the rank-order correlation advisable. It will also be observed that the Pearson-r's between October OSAS scores and the later tests in December, February and April were significant beyond the 1% confidence level. The r-to-z transformations of these scores and the tests of significance of difference between r's showed the original October-December coefficients to be significantly different from (smaller than) the two correlation coefficients with February and April data.

Any interpretation of the above results might provoke numerous questions. The sociometric research literature indicated that the normally expected shifts in sociometric and OSAS scores over these time periods are not exceeded by these data. The greater correlation coefficients between the OSAS October results and the February and April results than between October and December data are difficult to explain. However, no such unique relationships are

TABLE 2

CORRELATION COEFFICIENTS BETWEEN EARLY SCHOOL ENTRANTS' SOCIOMETRIC TEST SCORES

AND BETWEEN THEIR GSAS SCORES

| | Tests Correlated | r | rho | p | r to z |
|---|---|---|---|---|---|
| GSAS: | October - December | .65 | | $<.01$ | .775* |
| | October - February | .86 | | $<.01$ | 1.293 |
| | October - April | .89 | | $<.01$ | 1.398 |
| SOCIOMETRICS: | October - December | | .53 | $<.01$ | |
| | October - February | | .57 | $<.01$ | |
| | October - April | | .48 | $<.01$ | |

* By r to z transformation October-December GSAS Pearson-r's prove to be significantly different from later two correlation coefficients ($p<.001$).

evidenced by the sociometric data. Although shifts in status do occur, the uniformly high correlation coefficients offer little support for the first hypothesis. Reliability studies reviewed by Mouton, Blake and Fruchter (24) would indicate that the shifts in status in those groups where many children entered the classrooms late in the year do not appear disproportionately large.

2. The data concerning the second hypothesis, that the constancy of social status will be a function of (inversely related to) the number of late entrants entering a classroom during the year, are presented in Tables 2 and 3.

Inspection of the data of Table 3 shows the real similarities between means of gains in scores by early school entrants between October and the later three tests. Group I consists of children from classrooms with 2-4 late school entrants, Group II of 5-6, and Group III of 7-13 late school entrants. The range of late school entrants was then from 2 to 13; the n of early entering children, chosen randomly from the several classrooms may also be seen in Table 3. These randomly selected groups (approximately 20% samples) are sufficiently large to satisfy most criteria of representatives. When the early entrants were appraised for gains or shifts in sociometric and CDAS scores between the October and April testing by analysis of variance, no significant difference between the three treatment groups occurred (Table 4). As in Table 3 the conditions describing these groups related to numbers of new entrants coming to each child's classroom. The n of control subjects in each group was then 50 for the October-February analysis of gains and 50 in Group I, 50 in Group II, and 100 in Group III for the October-April analysis when many classes then fell into the 7-13 late entrant range. Shifts in status were then computed as the difference between scores obtained in October and February as well as in October and April with each of the two instruments.

TABLE 3

MEANS OF GAINS ON SOCIOMETRIC AND OSAS SCORES FOR THE THREE GROUPS OF CLASSROOMS BASED ON NUMBER (UPPER, MIDDLE, AND LOWER THIRDS) OF LATE SCHOOL ENTRANTS BETWEEN OCTOBER AND FEBRUARY 1, AND OCTOBER AND APRIL 1.

| | | Group I (2-4) | | Group II (5-6) | | Group III (7-13) | |
|---|---|---|---|---|---|---|---|
| | | $\bar{X}$ | N | $\bar{X}$ | N | $\bar{X}$ | N |
| SOCIOMETRIC: | October - February | .0007 | 50 | .0023 | 50 | -.0076 | 50 |
| | October - April | -.0035 | 50 | -.0033 | 50 | -.0047 | 100 |
| OSAS: | October - February | .106 | 50 | .168 | 50 | .215 | 50 |
| | October - April | .237 | 50 | .341 | 50 | .211 | 100 |

**TABLE 4**

**SUMMARY OF ANALYSIS OF VARIANCE FOR EARLY ENTRANTS' SHIFTS IN SOCIAL STATUS AS RELATED TO NUMBER (UPPER, MIDDLE, AND LOWER THIRDS) OF LATE SCHOOL ENTRANTS BETWEEN OCTOBER AND JANUARY AND OCTOBER AND APRIL**

1. SOCIOMETRICS: October-February Shifts

| Source | SS | df | MS | F | P |
|---|---|---|---|---|---|
| Between Groups | 3,683.21 | 2 | 1,841.61 | 3.365 | <.05 |
| Within Groups | 80,440.76 | 147 | 547.22 | | |
| Total | 84,123.97 | 149 | | | |

2. OSAS: October-February Shifts

| Source | SS | df | MS | F | P |
|---|---|---|---|---|---|
| Between Groups | 2,953.06 | 2 | 1,476.53 | - | - |
| Within Groups | 222,907.94 | 147 | 1,516.38 | | |
| Total | 225,861.00 | 149 | | | |

3. SOCIOMETRICS: October-April Shifts

| Source | SS | df | MS | F | P |
|---|---|---|---|---|---|
| Between Groups | 144.25 | 2 | 72.13 | - | - |
| Within Groups | 135,018.62 | 197 | 685.37 | | |
| Total | 135,162.87 | 199 | | | |

4. OSAS: October-April Shifts

| Source | SS | df | MS | F | P |
|---|---|---|---|---|---|
| Between Groups | 7,394.46 | 2 | 3,697.23 | 2.64 | > .05 |
| Within Groups | 276,175.76 | 197 | 1,401.91 | | |
| Total | 283,570.22 | 199 | | | |

The F. of 3.365 with p= $<$.05 obtained between the October and February sociometric data suggests the possibility of a difference between groups related to the number of late entrants. Table 3 shows the major losses to have occurred among early school entrants in classrooms with the larger numbers of new entrants. Bartlett's test for homogeneity of variance (9) for the October-April data gave a chi-square of 14.44 with P= $<$.01. However, the relatively large n in each group, in view of Norton's study (19), would make questionable the usefulness of the Bartlett test. The significant F of 3.365 and the direction of difference between means of change scores in Table 3 indicate that the price of permitting larger numbers of late entrants to join the classroom during the year is a moderate loss in social status by the original group members. However, this appears to be a minor shift which has its impact on all three groups by April as all April sociometric shifts (Table 3) are downward. The OSAS, however, shows only moderate gains at all test periods.

It might be concluded from an examination of the data in Tables 2, 3, and 4 that the introduction of newcomers into these groups had no major effects on the social status or social acceptance of the early school entrants although some minor re-ordering of social relationships does occur. The evidence indicates that the number of late school entrants might be a contributing factor to the shifting of scores; its total effect does not appear appreciable when data from the longer time period analyses are examined.

3. Hypothesis 3, that late school entrants would show greater choice for the already well-chosen members of the groups, may be examined in Table 5. All early school entrants in each of the 21 classrooms of the 49 late school entrants present for the February sociometric testing and of the 51 late school entrants present for the April testing were divided into the upper, two middle, and lower fourths in social status in their classrooms on the

TABLE 5

TABLE OF CHI-SQUARES ON FEBRUARY AND APRIL SOCIOMETRIC CHOICES BY LATE SCHOOL ENTRANTS FOR UPPER, TWO MIDDLE, AND LOWER FOURTHS OF EARLY SCHOOL ENTRANTS BASED ON OCTOBER SOCIOMETRIC TESTS

| Late Entrants Choices | Criteria | Frequencies of Late Entrants' Choices going to each of the 4 Early Entrant Status Groups | | | | Chi-Square | P |
|---|---|---|---|---|---|---|---|
| | | I High | II Upper Middle | III Lower Middle | IV Low | | |
| February | Work | 80 | 36 | 25 | 5 | 82.65 | < .01 |
| February | Play | 78 | 37 | 22 | 9 | 73.67 | < .01 |
| April | Work | 77 | 43 | 18 | 12 | 69.89 | < .01 |
| April | Play | 85 | 39 | 18 | 8 | 93.68 | < .01 |



basis of the first sociometric tests in October. Separate analyses were made for work and play choices. Frequencies under each of the four quarters, then, indicate the distribution of late shool entrants' choices for early entering children already categorized by the October tests. Inspection of Table 5 shows that the late school entrants continue the pattern of choice established in October by distributing the vast majority of their choices to those children already well-chosen in their group.

The uniformly high significant chi-square values for both work and play choices on both February and April testings offer clear support for the hypothesis and demonstrates the very positive tendency for the already well-chosen child to be chosen by newcomers to his group.

4. The fourth hypothesis, that late entrants will be chosen more often on a sociometric test on the "work" criterion than on a "play" criterion, was tested and the data are presented in Table 6. Both February and April data

TABLE 6

t-TESTS OF DIFFERENCES BETWEEN MEANS OF PLAY AND OF WORK CHOICES OF EARLY SCHOOL ENTRANTS FOR LATE SCHOOL ENTRANTS

| Test | Criterion | $\bar{X}$ | N | t | df | P |
|---|---|---|---|---|---|---|
| February | Play | .0147 | 49 | 1.81 | 97 | > .05 |
| | Work | .0118 | 49 | | | |
| April | Play | .0151 | 50 | 3.144 | 99 | < .01 |
| | Work | .0204 | 50 | | | |

are presented. In February complete date were available for 49 late school entrants and in April for 50 late school entrants. The means for play choices



were compared with the means for work choices in both testings. It will be observed that the t-test of significance of the differences between the means of total scores in April reaches the 5% confidence level. Crystallization of choice seems to have occurred by April; the hypothesis is accepted.

5. The fifth hypothesis, that late school entrants will tend to be below the original group members in social status throughout the year, was tested by a t-test of significance of difference between means of the experimental and control groups on the several testings. Both the sociometric and OSAS data were used. Also, the analyses compared matched experimentals and controls as

TABLE 7

t-TESTS OF DIFFERENCES BETWEEN MEANS OF TOTAL SOCIOMETRIC AND OSAS SCORES OF MATCHED AND STRATIFIED CONTROL GROUPS ON THE SEVERAL TESTS

| Control Groups | Tests | $\bar{X}$ | N | t | df | P |
|---|---|---|---|---|---|---|
| 1. Stratified | October Sociometrics | .033 | 102 | 1.88 | 142 | > .05 |
| Matched | October Sociometrics | .044 | 42 | | | |
| 2. Stratified | December Sociometrics | .031 | 102 | 1.90 | 142 | > .05 |
| Matched | December Sociometrics | .041 | 42 | | | |
| 3. Stratified | February Sociometrics | .031 | 102 | 2.37 | 142 | < .05 |
| Matched | February Sociometrics | .043 | 42 | | | |
| 4. Stratified | April Sociometrics | .030 | 102 | 2.69 | 142 | < .01 |
| Matched | April Sociometrics | .044 | 42 | | | |
| 5. Stratified | October OSAS | 3.30 | 102 | 1.14 | 142 | > .05 |
| Matched | October OSAS | 3.39 | 42 | | | |
| 6. Stratified | December OSAS | 3.40 | 102 | 1.72 | 142 | > .05 |
| Matched | December OSAS | 3.52 | 42 | | | |
| 7. Stratified | February OSAS | 3.39 | 102 | 1.81 | 142 | > .05 |
| Matched | February OSAS | 3.54 | 42 | | | |
| 8. Stratified | April OSAS | 3.47 | 102 | 2.81 | 142 | < .01 |
| Matched | April OSAS | 3.69 | 42 | | | |

well as total experimentals and stratified controls. Total sociometric scores were used and no seperate sex analyses were made. First, Table 7 presents the data when comparisons are made only between the stratified controls and the matched control groups. The t-tests of significance of differences between means of the two control groups are generally small. However, differences reach the 5% confidence level on three comparisons; therefore, both control groups were treated in comparisons with means of the experimental subjects. These data are presented in Table 8.

TABLE 8

t-TESTS OF DIFFERENCES BETWEEN MEANS OF SOCIOMETRIC AND OSAS SCORES OF LATE AND EARLY SCHOOL ENTRANTS

| Groups | Tests | $\bar{X}$ | N | t | df | P |
|---|---|---|---|---|---|---|
| SOCIOMETRICS | | | | | | |
| 1. Stratified Controls | February | .031 | 102 | 4.06 | 149 | $<.01$ |
| Total Experimental | February | .013 | 49 | | | |
| 2. Matched Controls | February | .043 | 40 | 4.89 | 39 | $<.01$ |
| Matched Experimentals | February | .014 | 40 | | | |
| 3. Stratified Controls | April | .030 | 102 | 3.14 | 151 | $<.01$ |
| Total Experimentals | April | .017 | 51 | | | |
| 4. Matched Controls | April | .044 | 42 | 4.47 | 41 | $<.01$ |
| Matched Experimentals | April | .018 | 42 | | | |
| OSAS | | | | | | |
| 5. Stratified Controls | February | 3.39 | 102 | 3.42 | 149 | $<.01$ |
| Total Experimentals | February | 3.10 | 49 | | | |
| 6. Matched Controls | February | 3.54 | 40 | 4.95 | 39 | $<.01$ |
| Matched Experimentals | February | 3.20 | 40 | | | |
| 7. Stratified Controls | April | 3.47 | 102 | 1.97 | 151 | $>.05$ |
| Total Experimentals | April | 3.31 | 51 | | | |
| 8. Matched Controls | April | 3.69 | 42 | 3.97 | 41 | $<.01$ |
| Matched Experimentals | April | 3.39 | 42 | | | |

Inspection of Table 8 shows that the early school entrants of the control groups consistently obtained higher scores on both the sociometric tests and the OSAS. The t-tests of significance of differences between means on the several testings reach the 1% confidence level on all tests except that between the stratified controls and total experimentals on the OSAS in April when the 5% confidence level is not reached. However, the 1% confidence level was reached in April on the OSAS between the matched controls and matched experimental groups.

When means of February and April scores of late school entrants are compared (Table 9), it will be observed that the newcomer does make material

TABLE 9

t-TESTS BETWEEN MEANS OF LATE SCHOOL ENTRANTS' FEBRUARY AND APRIL SOCIOMETRIC AND OSAS SCORES

| Tests | | $\bar{X}$ | N | t | df | P |
|---|---|---|---|---|---|---|
| 1. Sociometric | February | .013 | 49 | 2.395 | 48 | $<.05$ |
| | April | .017 | 49 | | | |
| 2. OSAS | February | 3.10 | 49 | 4.356 | 48 | $<.01$ |
| | April | 3.31 | 49 | | | |

progress in social status during his stay in the new classroom. The April means on both sociometrics and OSAS are significantly higher ($t=2.395$, $P<.05$ for sociometrics and $t=4.356$, $P<.01$ for OSAS) than the February means. These data with the evidence of Table 8 indicate the slow but steady progress in social status made by late school entrants.

The data rather conclusively support the hypothesis that the early school entrants maintain higher social status and social acceptance scores throughout the year. The handicap apparent for the late school entrant may be diminishing

by April when no significant differences between OSAS scores for the stratified controls and the total experimental group were found. These data will bear close examination and must be considered as of central importance in this study.

6. Hypothesis 6, that late school entrants will have higher anxiety test scores both at the time of entering school and near the end of the school year in April, is tested by using the t-test of significance of difference between means of anxiety scores of the control and experimental groups. Because the stratified and matched controls were so nearly identical on the three tests (Groups 1, 2 and 3 of Table 10), comparisons are made only between scores of stratified controls and the total experimental group. The two analyses are of

TABLE 10

t-TESTS OF DIFFERENCES BETWEEN MEANS OF ANXIETY TEST SCORES OF EARLY AND LATE SCHOOL ENTRANTS

| Groups | | $\bar{X}$ | N | t | df | P |
|---|---|---|---|---|---|---|
| 1. Stratified Controls | September | 15.28 | 102 | .96 | 142 | > .05 |
| Matched Controls | September | 13.88 | 42 | | | |
| 2. Stratified Controls | November | 13.59 | 102 | 1.08 | 142 | > .05 |
| Matched Controls | November | 11.93 | 42 | | | |
| 3. Stratified Controls | April | 11.91 | 102 | 0.88 | 142 | > .05 |
| Matched Controls | April | 10.50 | 42 | | | |
| 4. Stratified Controls | September | 15.28 | 102 | 1.49 | 151 | > .05 |
| Total Experimentals | (Initial Tests) | 13.18 | 51 | | | |
| 5. Stratified Controls | November | 13.59 | 102 | 0.28 | 151 | > .05 |
| Total Experimentals | (Initial Tests) | 13.18 | 51 | | | |
| 6. Stratified Controls | April | 11.91 | 102 | 0.41 | 150 | > .05 |
| Total Experimentals | April | 11.28 | 50 | | | |

scores made on the tests one week after entering school for both controls and experimentals as well as between the April scores of the stratified controls

and total experimental group. The data of Table 10 present these results. No differences between the control and experimental groups at any of the testing periods proved significant and the hypothesis must be rejected. If the anxiety test provides a valid measure of anxiety, it must be concluded that the late school entrants are not more anxious than the early school entrants.

7. Hypothesis 7, that late school entrants will receive higher behavior problem ratings (H-O-W scores) by their teachers than will the early school entrants, is tested by a t-test of significance of differences between means. Teachers rated all early entrants in their rooms in November and all late school entrants one month after they entered school. These ratings provided data for the first comparison. The second comparisons were between April scores for both groups. Data on only the stratified control group and total experimental groups were used in the analysis presented in Table 11 because of the marked similarity (Groups 1 and 2, Table 11) between the scores of the stratified and matched control groups.

TABLE 11

t-TESTS OF DIFFERENCES BETWEEN MEANS OF H-O-W RATINGS OF EARLY AND LATE SCHOOL ENTRANTS

| Groups | Tests | $\bar{X}$ | N | t | df | P |
|---|---|---|---|---|---|---|
| 1. Stratified Controls | November | 67.31 | 102 | 0.55 | 142 | $>.05$ |
| Matched Controls | November | 65.38 | 42 | | | |
| 2. Stratified Controls | April | 67.16 | 102 | 0.53 | 142 | $>.05$ |
| Matched Controls | April | 65.26 | 42 | | | |
| 3. Stratified Controls | November | 67.31 | 102 | 0.43 | 147 | $>.05$ |
| Total Experimentals | (Initial Ratings) | 65.98 | 47 | | | |
| 4. Stratified Controls | April | 67.16 | 102 | 0.69 | 151 | $>.05$ |
| Total Experimentals | April | 64.92 | 51 | | | |

An inspection of Table 11 shows that the two means in both Groups 3 and

4 differ little and the t-tests of significance of difference between means fail to reach the 5% confidence level. The hypothesis must be rejected and it is to be concluded that late school entrants manifest no greater behavior problems as rated by their teachers than do early school entrants, both soon after they enter school and at the end of the school year.

8. Hypothesis 8, that late school entrants will make lower scores on the California Test of Personality than will the early school entrants, is also tested by a t-test of significance of differences between means. Tests were administered to early school entrants in September and to late school entrants one week after school entry and again to all children in April. Differences between stratified and matched controls (Groups 1 and 2, Table 12) were not

TABLE 12

t-TESTS OF DIFFERENCES BETWEEN MEANS OF TOTAL SCORES ON THE CALIFORNIA TEST OF PERSONALITY OF EARLY AND LATE SCHOOL ENTRANTS

| Groups | Tests | $\bar{X}$ | N | t | df | P |
|---|---|---|---|---|---|---|
| 1. Stratified Controls | September | 108.90 | 102 | 0.62 | 142 | > .05 |
| Matched Controls | September | 110.81 | 42 | | | |
| 2. Stratified Controls | April | 113.67 | 102 | 0.61 | 142 | > .05 |
| Matched Controls | April | 115.95 | 42 | | | |
| 3. Stratified Controls | September | 108.90 | 102 | 2.32 | 151 | < .05 |
| Total Experimentals | (Initial Tests) | 115.78 | 51 | | | |
| 4. Stratified Controls | April | 113.67 | 102 | 0.56 | 150 | > .05 |
| Total Experimentals | April | 115.62 | 50 | | | |

significant; therefore, only comparisons between stratified controls and the total experimental subjects were made on initial test scores and on final scores achieved in the April testing. These data are presented in Table 12. A t of 2.32 computed for the difference between means of initial test scores with P=<.05 was found for the comparison of stratified controls and the total

experimental group. April scores did not demonstrate differences which were statistically significant. The facts not only fail to support the hypothesis but the differences appear in the opposite direction with the late entrants achieving higher adjustment scores on initial tests with no differences being evidenced in the April tests between early and late school entrants.

9. Hypothesis 9, <u>that late school entrants in classrooms taught by teachers with higher scores on the Wiley Child Guidance Attitude Scales will show more favorable progress in their scores on the several testing instruments</u>, is tested by a chi-square analysis employing a 2x2 contingency table. Two column headings, above the median and below the median, based on a categorization of teachers' child guidance attitude scores and two rows, above and below the median, based on the magnitude of childrens' change or progress scores formed the contingency table. The data of Table 13 constitute the results of this analysis.

TABLE 13

CHI-SQUARE ANALYSIS OF GAINS IN SCORES OF LATE SCHOOL ENTRANTS IN CLASSROOMS OF TEACHERS WITH HIGH AND LOW CHILD GUIDANCE ATTITUDE SCORES

| Tests | Teachers High Wiley Scores | | Teachers Low Wiley Scores | | | |
|---|---|---|---|---|---|---|
| | Low Gain | High Gain | Low Gain | High Gain | Chi-Square | P |
| 1. Sociometric February-April | 17 | 9 | 13 | 11 | .220 | > .05 |
| 2. OSAS February-April | 14 | 12 | 11 | 12 | .176 | > .05 |
| 3. Anxiety Initial Test-April | 12 | 14 | 14 | 9 | 1.060 | > .05 |
| 4. California Test of Personality Initial Test-April (Personal) | 17 | 10 | 11 | 12 | 1.154 | > .05 |
| (Social) | 15 | 12 | 12 | 11 | .057 | > .05 |
| 5. H-O-W Initial Test-April | 12 | 12 | 11 | 12 | .022 | > .05 |

Inspection of the chi-square values presented reveals no differences in change or progress by children related to their teachers' attitudes. On none of the several instruments can the null hypothesis be rejected; it may, therefore, be concluded that the teachers' child guidance attitudes as measured by the Wiley scale are not related to changes in late school entrants' scores.

## Discussion

Late school entrance does not appear to be associated with increased anxiety, poorer self-perceptions of personal-social emotional adjustment, and higher behavior problem ratings by teachers as hypothesized in this study. The related research literature generally falls into two categories: (1) experimental, small group research, or (2) studies correlating the number of schools children have attended with various measures of personal and social adjustment. The latter, while provocative and obviously important as sociological contributions exploring some general effects of population mobility, may not concentrate sufficiently on such issues as change over time, controls which minimize the effects of environmental forces, and an adequate description of the environmental situation being studied. Small group research, on the other hand, while most fruitful in its theoretical implications, appears to fall short in its interpretative contributions to the naturalistic setting of the classroom because of the great complexity of social forces in this less controlled setting.

Perhaps the negative results concerning the relationship of late school entrance and children's adjustment as measured by the several instruments are the most significant findings of the study. Early school entrants, children beginning school in September, 1957, did not appear to be particularly disturbed by the arrival of newcomers. In only one analysis (shifts in social status between October and February, Table 4) did change of the original social structure appear to be related to the numbers of children coming into the group. The marked constancy of social status of early school entrants (Tables 1 and 2), the fact that shifts appeared to be only slightly related to the numbers of children entering the group, and the consistently higher sociometric and OSAS scores of the early school entrants (Table 8) might

serve to alleviate some of the concern teachers might have concerning the effects of newcomers on the original group members.

The sociometric and OSAS data, on the other hand, do picture the late school entrant as greatly penalized in social status (Table 8), but making significant gains between February and April (Table 9). However, the significance of the data of Table 8 must be looked for elsewhere. In particular, Tables 10, 11 and 12, presenting comparative data between early and late school entrants on the anxiety test, H-O-W Behavior Rating Schedules, and the California Test of Personality must be examined. It can be seen that the late school entrants seem to show no ill effects on these tests of their poorer social adjustment. Although they do not differ significantly from the control groups, their anxiety test scores are lower (Table 10) and their behavior problem ratings are lower (again not significantly, Table 11). The California Test of Personality scores of the total experimental group are higher ($t=2.32$, $P=<.05$) in their first test in September (Table 12). Generally, the differences are small and the best conclusion to make is that these late school entrants did not appear to be more anxious, emotionally disturbed, or present more behavior problems than did the early school entrants. On the other hand, any advantages in adjustment as measured by these three tests belong to the late school entrants.

The sociometric tests and the OSAS measured acceptance by other children. Late school entrants, coming as strangers to new classrooms, must obviously change their role somewhat gradually from stranger to well-known friend. This does not appear to be a disturbing task for these children. Perhaps three explanations could be offered: (1) the three adjustment measures (anxiety test, H-O-W, and California Test of Personality) are not valid measuring instruments, and/or (2) American children today as represented by this group can take entrance into new schools in stride, and/or (3) these teachers and

schools employ great skill in bringing new children into the group. Perhaps other explanations are possible.

The sociometric data reveal one finding of probable significance to teachers which small group research as well as other more naturalistic studies have anticipated. The late entering children show a marked tendency to choose those children in the classroom who have already been frequently chosen by their peers before the arrival of the late entrants (Table 5). The social structure of the group remains quite stable as the newcomer throws his support to the pre-existing structure. Early school entrants (Table 6) failed to discriminate between the "play" and "work" criteria in their choices of newcomers in February but give significantly more work choices than play choices in April However, these very general criteria, due to failure to specify activities, may still not be the most adequate test of the hypothesis that the late school entrants will be more frequently chosen on "formal" than on more "intimate" activities. By April early entrants do discriminate between the two criteria in their choices of late school entrants.

The Wiley Child Guidance Attitude Scale was not productive in explaining late entrants' test score gains. The chi-square analysis of Table 13 suggested no relationship between teachers' attitudes and the change in late entering children's test scores during the year. This instrument may not be useful with groups so sophisticated in child care techniques as teachers.

Finally, it was made clear to these teachers in September, 1957 what the purpose of the study was and they could, therefore, have been more conscious of the needs of these late school entrants. However, because late school entrance is such a continuing matter in their communities and schools, these teachers appeared to soon lose sight of the fact that a particular child entered school late in the school year. Whether late school entrance and the poorer social adjustment demonstrated in this study are associated with other

significant aspects of school such as school achievement remain as issues yet to be explored.

## SUMMARY

In order to study the relationship between late school entrance and children's adjustment, 51 children from fourth, fifth, and sixth grades in Palm Beach and Broward Counties, Florida who entered schools in these counties between December 1, 1957 and February 15, 1958, are compared with a matched as well as a stratified (randomly selected from each room) group of children starting school at the regular school opening in early September, 1957. Statistical comparisons are made between the late and early school entrants on their scores on: Sociometric Tests, Ohio Social Acceptance Scale, Haggerty-Olson-Wickman Behavior Rating Schedules, Schedule B, Iowa Adaptation - Manifest Anxiety Test, and the California Test of Personality. The Wiley Child Guidance Attitude Scale was administered to the teachers of the children before the study began. Comparisons are made on initial (at school entry) scores, end-of-year scores, and change or progress scores. The relationship of teachers' attitudes to children's progress scores on all the test instruments is studied. The results are generally negative in that the scores on personal-social adjustment of late school entrants differ little from those of early school entrants. The results are:

1. Early school entrants tend to hold their social status positions (sociometric and OSAS scores) throughout the year. Considerable constancy in scores exists.

2. The shifts (gain or loss) in status of early school entrants, which do occur, show a significant relationship to number of late school entrants coming into the group, over the short period of time October-February, but the number



of newcomers does not appear to be related to changes in the original group members over longer time periods. Greater losses in status occur more frequently when many late entrants come in a short time period. These findings occur with sociometric test data; however, the OSAS does not reveal a shifting in acceptance scores related to numbers of late school entrants.

3. Late school entrants tend to choose the already well-chosen members of the group on the sociometric test on both the "work" and "play" criteria.

4. There are no differences in early school entrants' choices for late school entrants on the two criteria, work and play in February; however, by April the early school entrants direct significantly more of their choices to late school entrants on the "work" criterion than on the "play" criterion.

5. Late school entrants are below the original group members in social status through the year. The difference on the OSAS is not significant in April and the late school entrants appear to be making some progress in social status gains. Significant gains are evidenced between February and April on both sociometric and OSAS data.

6. Late school entrants do not differ significantly from early school entrants at any time in the year on their scores on the anxiety test, H-O-W or California Test of Personality.

7. Teachers' child guidance attitudes as measured by the Wiley Child Guidance Attitudes Scale do not appear to be related to late school entrants' measures of adjustment (test score gains and losses during the year.)

The data on social status and social acceptance were most definitive in distinguishing between early and late school entrants. Other tests measuring adjustment revealed no differences between early and late school entrants. The relationship of late school entrance and measures of school achievement remains unexplored.



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